

### REMARKS

Claims 1 to 3, 5, 6, and 8 to 20 remain pending. Claims 4 and 7 have been cancelled.

Claims 4 to 20 have been rejected under 35 U.S.C. 112, second paragraph, as being indefinite. The Action stated there were improper multiple dependent claims.

The rejection of claims 5 to 20 under 35 U.S.C. 112, second paragraph, is not understood. These claims do not contain any multiple dependencies. Clarification is requested.

The rejection of claim 4 under 35 U.S.C. 112, second paragraph, is moot since it has been cancelled.

Claim 7 has been objected to for containing a trademark or trade name. This objection is overcome since claim 7 has been cancelled.

Claim 20 has been objected to for the term "stepof". The objection is overcome in view of the amendment to claim 20.

Claim 17 has been rejected under 35 U.S.C. 102(b) as being anticipated by the Boncheva et al. article (Boncheva). The Action stated that the Boncheva disclosed the claimed cumene hydroperoxide. The Action also stated that no weight was given to the process step.

The rejection of claim 17 over 35 U.S.C. 102(b) as being anticipated by the Boncheva is not well taken. Claim 17 requires that the cumene hydroperoxide be free of inorganic cations. The process of Boncheva does not yield a cumene hydroperoxide free of

inorganic cations. Boncheva discloses a process for oxidizing cumene to cumene peroxide in the presence of a weakly alkaline anionic resin. The weakly alkaline anionic resin of Boncheva neutralizes acids present in the cumene starting material by exchanging its cations, for example  $\text{Na}^+$ , with  $\text{H}^+$  cations coming from the acids, resulting in contamination of the reaction environment with inorganic cations. In view of the presence of inorganic cations in its reaction product, Boncheva cannot meet the claim requirement that the cumene hydroperoxide be free of inorganic cations.

Claim 17 has been rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 3,171,860 to Codignola (Codignola). The Action stated that the Codignola disclosed the claimed cumene hydroperoxide. The Action also stated that no weight was given to the process step.

The rejection of claim 17 over 35 U.S.C. 102(b) as being anticipated by the Codignola is not well taken. Claim 17 requires that the cumene hydroperoxide be free of inorganic cations. The process of Codignola does not yield a cumene hydroperoxide free of inorganic cations. Codignola discloses a process for oxidizing cumene to cumene peroxide in the presence of a sodium salt of cumene hydroperoxide, which is employed as a reaction accelerator. The reaction product of Codignola contains residual sodium salt of cumene hydroperoxide as well as the sodium salt of the acid by-product formed in the course of the reaction (col. 2, lines 62 to 67). In fact, Codignola discloses that such residual sodium salts are advantageously washed from the reaction product. In view of the presence of inorganic cations in its reaction product, Codignola cannot meet the claim requirement that the cumene hydroperoxide be free of inorganic cations.

Claims 1 to 20 have been rejected under 35 U.S.C. 103(a) over Codignola in view of Boncheva. The Action stated that Codignola discloses a process in which cumene is oxidized in a liquid phase in the presence of sodium salt at a temperature of 70° to 120°. The Action also stated that the process of Codignola differs from the claimed process in that Codignola employs a sodium salt while the claimed process employs a basic resin. The Action further stated that the secondary reference Boncheva discloses oxidation of cumene in the presence of a weakly alkaline anionic resin. The Action also stated that it would have been obvious to practice the claimed invention by varying the process conditions according to the disclosures of Codignola and Boncheva.

The rejection of claims 1 to 3, 5, 6, and 8 to 20 under 35 U.S.C. 103(a) as being unpatentable over Codignola in view of Boncheva is overcome. Independent claim 1 now requires the oxidizing reaction be carried out in the presence of a basic resin and that that resin not release inorganic cations to the reaction environment. Codignola discloses employing the sodium salt of cumene hydroperoxide as well as alkaline substances, such as caustic soda, in the disclosed oxidizing reaction (col. 1, lines 30 to 31). However, Codignola does not disclose employing a basic resin as required in the claimed invention. Substituting the weakly alkaline resins of Boncheva for the sodium salt of cumene hydroperoxide or the alkaline substances of Codignola would not result in the claimed invention, as the weakly alkaline resins of Boncheva differ substantially in function compared to the basic resins useful in the claimed invention. As discussed above, the resins of Boncheva neutralize acids present in the cumene starting material by exchanging cations, for example  $\text{Na}^+$ , with  $\text{H}^+$  cations coming from the acids, resulting in contamination

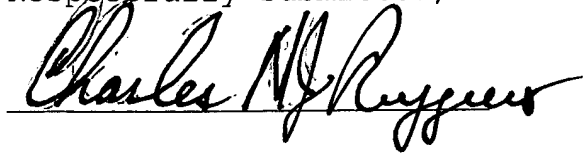
of the reaction environment with inorganic cations. In contrast, the basic resins useful in the claimed invention do not create such contamination. Thus, claim 1 is not obvious because the combination of Codignola and Boncheva does not yield the claimed invention. Since the combination of Codignola and Boncheva does not yield the claimed invention, and arguably since such a combination teaches away from the claimed invention, such a combination clearly would not be suggested by one of ordinary skill in the art.

The rejection of claims 4 and 6 under 35 U.S.C. 103(a) as being unpatentable over Codignola in view of Boncheva is moot since they have been cancelled.

Claims 5 and 6 further distinguish over the cited combination as those claims require that specific classes of basic resins be set forth. None of the classes of basic resins recited in claims 5 and 6 are disclosed in either Codignola and Boncheva. Thus, claims 5 and 6 are not obvious in view of the cited combination.

Reconsideration of claims 1 to 3, 5, 6, and 8 to 20 is deemed warranted in view of the foregoing. Allowance of these claims is earnestly solicited.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Charles N. J. Ruggiero", written over a horizontal line.

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